## ABSTRACT

The present invention relates to dynamic policies for transferring people from an automated or user-directed call handling system to a human operator, depending on considerations of the likelihood of the failure of the interaction with the call-handling system, predictions about the expected time or frustration associated with using the system, and the current load on human operators. Systems and methods leverage probabilistic models of system and user behaviors built from logged data. A decision-theoretic analysis and corresponding models of ideal decisions about the transfer of calls from an automated system to a human operator are provided. The methods have application to a spectrum of call-handling systems including touch-tone and speech-recognition—based systems.